Tips for Choosing Enterprise-wide DSS Software

by D. J. Power

Introduction

Choosing an enterprise-wide DSS software package is a major corporate decision that will have profound implications for the competitiveness of a firm for many years. Firms should invest significant funds in making this decision and senior managers need to be very involved in all aspects of the decision process. Senior managers should NOT just ratify a decision made by technical managers.

Given the above strong injunction for senior management involvement, I'm not naively going to assume that senior managers will follow the advice. Working with technological decisions requires a lot of new learning and busy managers often have other important concerns that are easier to deal with than decision support and management information. Senior managers don't need to become technical gurus to be involved in evaluating software packages, discussing information needs, meeting with vendors and assessing the reliability of senior executives at the vendor companies as strategic partners. An enterprise-wide DSS is a strategic application that can cost millions of dollars to implement and have both positive and in some cases negative consequences for a firm. A company many need to purchase a new hardware platform, upgrade networks and manager workstations, purchase software for a data warehouse, "populate" the warehouse with "cleaned" data, develop the analysis programs and user interface. Conceivably a company may be involved with 3-4 large vendors and 3-10 small and medium-sized vendors at different stages in an enterprise-wide DSS design and implementation project. That's a big commitment and a time consuming process with the intangible goal of providing better information for managerial decision making!

The following steps can help insure a systematic evaluation:

Creating an Evaluation Team

- Identify who will be on the team.
- Specify roles.
- Anticipate and manage time commitment.
- Choose appropriate leadership.
- Create a charge/direction for the team.

The evaluation team is important. The people who are selected for the team will be busy. Make sure the team members have time to participate actively. This is not a team for people who want a resume builder or a political veto over what happens in DSS. The team should define functional requirements for the software and prepare a project plan.

An evaluation team should be reasonably small, for example 5-7 members. A project leader should be selected for the evaluation team. Senior managers need to get regular updates from the team. Should a senior manager serve on the evaluation team? Probably not, but the project champion in the executive group should try to attend some team meetings. Recently, I spoke to a Vice President for IT who said he was trying to get the marketing VP interested in building a DSS. The marketing VP responded that "you've got some analytical people in your shop. Let them do it." Know who the sponsor is! Know "who's doing it."

Defining Requirements

Specifying requirements for an enterprise-wide DSS in writing is important. The team should brainstorm criteria and conduct systematic interviews with company personnel who will be impacted, but who are not on the DSS evaluation team. The evaluation team is the "tip of the iceberg". They need to communicate effectively with the people who want a DSS, the people who will be expected to use the DSS and the people who are concerned, opposed, bored, or out of touch. Communicate the "charge" of the team and get involvement and "buy in" on building an enterprise-wide DSS. Ask, review what you have heard, tell people what you have heard, ask people if you've got it right, tell people what you think it means, ask if you've got it right, make it happens the way you've described it on time and under budget. Don't over sell or under deliver.

Ask the following questions

- What functions and tasks will managers perform with the DSS? When will it be used? by whom? for what?
- What controls and security are needed?
- What operational performance is needed?
- What is the design concept of the DSS?
- What are the design architecture strengths/problems?

Evaluating Products

Today no vendor can really sell an entire "off-the-shelf" package called an enterprise-wide DSS. It doesn't exist. You need to put together a solution for your firm. You can review case studies and see what other firms have done. That's a good idea. You may find a firm in another industry that has a DSS solution that you can build on for your company. If you're lucky you may be able to get access to technical people in the company. REMEMBER enterprise-wide DSS are increasingly strategic applications and the "open door" may be closing. Vendors will try to help you get access to their customers, but you need to make it useful for the other company to cooperate. Be sure you're ready to reciprocate and share what you learn at a later date. Cooperation is a two way street and that's especially true with rapidly changing technologies related to data warehousing and enterprise-wide DSS. Systems can become obsolete quickly. Today's DSS success story company may need to migrate to another platform, product, front-end tomorrow. So when you're asking for help be ready to share what you learn. In general

you'll want to ask about: which products did you use? how is the product performing? can we make site visits? are product demonstrations available?

Preliminary evaluation. In this step actual products that are available in the market should be identified and screened. A vendor profile should be compiled for each company marketing a viable DSS software product. The profile should focus on the strengths and weaknesses of the vendor.

Functional screening and detailed review based on criteria. The cost, design, support and installation requirements of the DSS packages that pass the initial screening should be carefully examined. It is important to assess that the package is appropriate to the needs of the company. Ask the vendors the same questions. For example, you may want to ask:

- Who are current users that we can contact? (obtain names, titles, etc.)
- What are your pricing arrangements?
- What are your various support provisions?
- How many people at your company are assigned to product support?
- How is installation/delivery scheduled?
- When was the product initially released? When was the current version released?
- How many companies currently use the product?
- Have any problems been encountered with the current or recent releases?
- What improvements are planned for the package?
- How difficult is it to install the package?

Operational performance evaluation. Managers should test the finalist packages that have passed earlier tests. The evaluation team needs to work with the vendors to plan and conduct the operational testing. Some vendors have demonstration software at their web sites that can be used for an initial evaluation. Actual sites with the software installed should be visited. Ask the hard questions. Can the software/hardware handle the load? Is it scalable? What are the direct and indirect costs? What is the status of the vendor? stability and reliability? assessment of personnel? Assess vendor support!! Check with current customers about installation and training support.

Negotiating with Vendors

The evaluation team has been busy. Now the plan needs to get pulled together. The company may need to add some staff, a lead vendor for a data warehouse/DSS submits a final proposal with a price for software and services, a hardware vendor clarifies details in the infrastructure proposal, the pieces are coming together. Now we need to negotiate. Negotiate what? price? support? installation? when? with whom?

Making a final selection involves negotiation with vendors and possibly a third party consulting group. Managers should also prepare an installation plan and a post installation review.

Building an enterprise-wide DSS is not easy. The pieces may "fall apart". Managers will have trouble with performance guarantees on DSS projects. No vendor can guarantee that the system once it is built will really provide useful, decision relevant information. The guarantees will deal with response times, reliability, timeliness of the data, capabilities of the systems -- "slice and dice" and graphs. The evaluation team needs to get transformed into a project team that makes all of this happen. Key players need to carry over to the implementation phase. The evaluation team needs to accept collective responsibility for the success of the project and they need to be tasked to make it happen. Negotiating with vendors begins the project implementation. Be realistic. You may get what you ask for in a DSS and you should expect to pay for what you want. Kick the tires! and get out your tools and build an enterprise-wide DSS. You can NOT drive it home from the showroom.

(If you have additional tips you want in this list, please send an email message to: daniel.power@uni.edu)

Please cite this paper as: Power, D. J. "Tips for Choosing Enterprise-wide DSS Software". DSstar, The On-Line Executive Journal for Data-Intensive Decision Support, November 18, 1997: Vol. 1, No. 7.